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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/529,281

03/25/2005

Seishi Miura

03500.017618.

2011

5514 7590 07/10/2008
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EXAMINER

MACCHIAROLO, PETER J

ART UNIT

PAPER NUMBER

2879

MAIL DATE

DELIVERY MODE

07/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,281	Applicant(s) MIURA ET AL.	
	Examiner PETER J. MACCHIAROLO	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/20/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The reply filed on 04/04/2008 consists of changes to the claims, and further, the reply consists of remarks related to the prior rejection of claims in the previous Office Action. The above have been entered and considered. However, pending claims 28-38 are not allowable as explained below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 36 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 36 recites a thickness (da1) of the first layer of the first OEL device satisfies a first equation and a thickness of the combined first layer and EL layer satisfies a second equation. However, the variables recited in the equations are not all properly defined and the corresponding descriptions of the equations' variables are unclear. For instance, what is "i"? And it appears that the thickness of the first layer of the first OEL device (da1 nm) multiplied by the refractive index (unitless) is equal to 0,1,2. This does not appear correct, since there is no corresponding unit of measure, i.e. nanometers or other such unit. The equations are unclear.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28-35, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al (USPGPUB 20020021268; “Yamazaki”).

Regarding claims 28, 29, and 38 Yamazaki discloses in the embodiment shown in figures 1-6 a display apparatus having a multicolor light emitting device comprising at least a first (red) and second (green) OEL devices provided on a substrate (300), the first and second OEL devices emitting lights of different colors, and each of the OEL devices having at least a first electrode (392) arranged on a side of reflecting light, a second electrode (389) opposed to the first electrode arranged on a side of light extracted and an EL layer (391) comprising an organic compound layer (the red EL layer having a matrix of Alq₃ and the green layer having a matrix of CBP, see paragraphs 61-63) arranged between the first electrode and the second electrode, wherein a light emitting region (not shown) of the first (green) OEL device is located on the first electrode side of the EL layer of the first OEL device (an inherent property of such a CBP based OEL), and a light emitting region (not shown) of the second (red) OEL device is located on the second electrode side of the EL layer of the second OEL device (an inherent property of such an Alq₃ based OEL).

Yamazaki's above embodiment (bottom emitting device) is silent to the first electrode being provided closer to the substrate than the second electrode

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However, Yamazaki teaches in a different embodiment (top emitting device) shown in figure 12b that the first electrode is provided closer to the substrate than the second electrode, and this improves light emitting efficiency.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Yamazaki with the first electrode being provided closer to the substrate than the second electrode, to improve light emitting efficiency.

Regarding claims 30 and 35, Yamazaki discloses at least in figure 2c each of the first and second OEL devices has a first layer (HTL 202) between the EL layer (107) and the first electrode (201) and has a second layer (ETL 205) between the EL layer (107) and the second electrode (206).

Regarding claim 31 and 32, Yamazaki discloses in at least paragraph 60-64 that the first OEL device (green) emits a light of a shorter wavelength than the second OEL device (red).

Regarding claim 33, Yamazaki discloses in at least paragraph 61 that the EL layers of the first and second OEL devices independent has a thickness from 10-35nm.

Regarding claim 34, Yamazaki discloses at least in figure 2c that the first layer of the first OEL device and the first layer of the second OEL device has the same thickness.

Regarding claim 37, Yamazaki discloses at least in figure 2b a third organic EL device wherein the first OEL device, the second OEL device and the third OEL device emit a different color of either blue, green or red respectively.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375. The examiner can normally be reached on 8:30 - 5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

/Peter Macchiarolo/
Primary Examiner, Art Unit 2879
(571) 272-2375